

BLIND RIVET FASTENING TOOLS

- INSTRUCTION MANUAL
- MALFUNCTION & REPAIR
- SAFETY RULES

FOR

MODELS

ZT- 0318VS

ZT- 0618VS

ZT- 0918VS

ZT- 1214VS

ZT- 1819VS

OPERATION

1. When the **Lever/Trigger** (29) is depressed, the **Throttle Valve** (24) is moved down off its seat by the **Valve Tube** (28). Air enters the bottom of the **Air Cylinder** (16), forcing the **Piston Assembly** (22A). As the **Piston Assembly** rises, the **Plunger Rod**(19) forces hydraulic fluid into the upper part of the **Hydraulic Section**(1),retracting the **Hydraulic Plunger**(4). Meanwhile, the **Jaws** (13) grip the mandrel of the rivet, pulling until the rivet is set and breaking the mandrel in the process.
2. When the **Lever/Trigger** is released, the **Throttle Valve** resets and shuts off the air supply. The **Valve Tube Spring** (28A) then lifts the **Valve Tube** (28) and exhausts the air through the hollow of the **Valve Tube**. The **Return Spring** (7) returns the **Hydraulic Plunger** to its original position. This open the **Jaws**, releases the mandrel, and retracts the **Piston Assembly** back to its original static site.
3. The **patented Vacuum Mandrel Collection System** is designed and highly recommended for higher productivity, less fatigue of operators, cleanness and safety of work area. It mainly consists of parts as **index #8 to #8M** shown as the exploded drawing. The compressed air is always standing by inside the chamber at the rear portion of the **Hydraulic Section** where the **Return Spring** is contained. The compressed air here will also assure perfect **shock absorption** as an air cushion in operation. Through the adjustment of the **Vacuum Regulator** (8D), the compressed air will create the Venturl effect and vacuum power to hold the rivet in the **Nosepiece** (30) regardless of the position and suck the broken mandrel backward to the **Mandrel Collector** (37) or via the **Guide Hose** (36) to the proper container.

SERVICING PROCEDURES

1.CHANGING NOSEPIECES

Hook up the tool to the air line and depress the **Lever/Trigger**. While continuing to the **Lever/Trigger** down, use the **Multi-Wrench** (33 or 34) to remove the unwanted **Nosepiece** and tighten the new **Nosepiece** in place again. When the **Lever/Trigger** is released and the tool is at rest, a circular opening should be visible when looking through the **Hydraulic Section** from the **Rear Gland** (8) to the **Nosepiece**.

2.CLEANING AND CHANGING OF THE JAWS

Disconnect the tool from the air line and then remove the **Head** (15) with the **Multi-Wrench**. Hold the **Jaw Housing Coupler** (14A) firmly and remove the **Jaw Housing** (14). Clean the **Jaws** with either a steel brush or solvent. If excessive wear is apparent, replace them with new **Jaws**. Before reassembling, apply a thin coat of oil to the sliding surface of the **Jaws**. Reassemble the tool in the reverse order while making sure that the chamfered end of the **Jaw Pusher** (12) is in contact with the Jaws properly.

3.JAW OPENING ADJUSTMENT

To obtain the maximum stroke of the tool, proper distance-setting between the **Jaw Housing** and the Head is very important. First loosen the **Lock Nut** (15A). A rivet is then inserted into the **Nosepiece** which should be selected to match the rivet size to be set. While screwing or unscrewing the **Head** to achieve the minimum opening of the **Jaws**, check if the rivet mandrel can be removed and inserted freely. Fasten the **Lock Nut** after the adjustment.

4.VACUUM ADJUSTMENT

Screwing or unscrewing the **Vacuum Regulator** (8D) to obtain the proper vacuum power for different sizes of rivets for the economy and efficiency of air consumption. **Make sure not to damage the nozzle** inside the **Vacuum Tube** (8A). Whether using the tool with vacuum or not, it is necessary to attach the **Deflector** (32) on the **Vacuum Tube** or **Rear Gland** for the sake of safety.

DAILY CARE

- 1.Check the tightness of the connections between the **Jaw Housing Coupler** (14A), **Nut** (10), **Jaw Housing** (14) and the **Hydraulic Plunger** (4), the **Nosepiece**, the **Head** (15) and the **Lock Nut** (16A).
- 2.If the jaws show excessive wear and / or are dirty, follow the steps provided in the **SERVICING PROCEDURES** section.

MALFUNCTION & REPAIR

A. Rivet mandrel is gripped by the jaws but the rivet can not be set and mandrel can not be broken

CAUSE : Low air pressure or loss of hydraulic fluid.

REMEDY : Increase air pressure to 7 bar (100 PSI) maximum at tool. Make sure all fitting including **Rear Gland** (8) and **Head** (15) are tightened. If malfunction persists, add hydraulic fluid as follows:

Loosening the **Lock Nut** (17) slightly and turn the tool upside down. Disassemble **Air Cylinder Body** from the **Hydraulic Section** and remove the **Head**. Next, make sure that the **Hydraulic Plunger** (4) is at the bottom of its stroke. If it must be pulled to the bottom of its stroke, replace the **Return Spring** (7).

Before adding hydraulic fluid, also check to see if any leaks appear in the **Air Cylinder Body**, **Head** or **Rear Gland**. If fluid is found in any of these areas , replace the appropriate **O-Rings** . Pour hydraulic fluid slowly into the **Hydraulic Section** until the fluid level reaches the top of the **Hydraulic Rod Guide** (1A). Wait a few seconds to allow any air bubbles to escape.

Reassemble the tool in reverse order. Use extreme care to avoid damage to **O-Rings**. A good rubber lubricant must be applied on the bearing surfaces of **Plungers** (4 & 19) and cylinder bores(1 & 16) before re-assembly . A slow rotational movement coupled with gentle pressure will aid in reinserting the **Plungers** (4 & 19).

NOTE: To achieve proper fluid level, **Head** must be removed when refilling. Use proper **hydraulic fluid** for the best performance of the tool.

B. Mandrel dose not fit completely into Nosepiece or fails to eject

CAUSE : A. **Jaw Housing** distance incorrect.

B. **Jaws** are dirty or damaged.

C. Fatigued **Jaw Pusher Spring**.

D. Fatigued **Return Spring**.

E. Air leakage in **vacuum system**.

REMEDY : A. Loosen the **Head** and check the rated stroke length. If shorter, search for worn or damaged **O- Rings** and replace it.

B. Clean or replace the **Jaws**.

C. Replace the **Jaw Pusher Spring**.

D. Replace the **Return Spring**.

E. Search for worn or damaged seals in the **vacuum system** and replace it.

C. Tool take more than one stroke under ideal conditions to set rivet and break mandrel

CAUSE : A. Insufficient hydraulic fluid.

B. Low air pressure.

C. Loose **Nosepiece** or improper size of **Nosepiece**.

D. Rivet Body too long for the thickness of the joint.

REMEDY : A. See **Remedy** under **MALFUNCTION & REPAIR A**.

B. Increase air pressure but **do not exceed** 7 bar (100 PSI) at tool.

C. Tighten **Nosepiece** or use right size of **Nosepiece**.

D. The Rivet Body should be 3-6 mm longer than the thickness of the joint.

SAFETY RULES

- * Use only dry filtered air regulated to **6.3bar(90 PSI)** on the tool inlet. **Do not exceed maximum 7bar(100PSI).**
- * Disconnect the tool from the air supply before any assembly or disassembly
- * Do not face the end of the **Rear Gland** (8) while operating the tool.
- * Inspect the **Hydraulic Section** prior to use. **Do not use if cracked.** Contact the distributor for repair or replacement.
- * **Do not pound** on the **Nosepiece** or the end of the **Head** or force the rivet into the hole of the **Nosepiece** as this will damage the tool.
- * Use only genuine replacement parts and proper hydraulic fluid for the maintenance of tools.
- * Make sure all parts are correctly and securely fastened.